

Appl. No. 10/706,059
Amtd. Dated _____
Reply to Office Action of July 10, 2006

Attorney Docket No. 81784.0290
Customer No.: 26021

REMARKS/ARGUMENTS

Claims 1-4 are pending in the application. Claims 1-4 are submitted to clearly distinguish patentably over the prior art for the reasons set forth hereafter. No new matter is involved.

Beginning on page 2 of the Office Action, claims 1-4 are rejected under 35 USC 103(a) as being unpatentable over US Patent 6,434,096 of Akagi et al. in view of US Patent 7,046,600 of Matsumoto. This rejection is respectfully traversed, and claims 1-4 are submitted to clearly distinguish patentably over the attempted combination of such references in their present form.

According to the Office Action and with regards to claims 1 and 2, Akagi et al. is said to teach all of the limitations of the claims except for the step of detecting a positive and a negative peak level and the step of setting a driving signal level when a beta value reaches a maximum. For these limitations, Masumoto is relied on. According to the Office Action, one skilled in the art at the time of the invention would have been motivated to combine the teachings of Akagi et al. and those of Matsumoto.

Further, according to the Office Action and with regard to claims 3 and 4, Akagi et al. is said to teach all the limitations except for a beta value detector circuit detecting a beta value and the maximum value of the beta value detector being used. For these limitations, Matsumoto is relied on. According to the Office Action, one of ordinary skill in the art at the time of the invention would have been motivated to combine the teachings of Akagi et al. and those of Matsumoto.

In accordance with the present invention, when setting an offset value supplied to a tilt adjustment coil, (1) an offset adjustment signal is recorded in a test recording area of an optical disc while varying the level of a driving signal supplied to the tilt adjustment coil, and (2) an operation to play back the recorded

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offset adjustment signal is performed to detect the maximum β value of the RF signal resulting from the playback.

Although Matsumoto mentions a β value, the reference merely describes setting, based on the β value, a recording laser power value optimal for a recording linear velocity. Nowhere does Matsumoto mention setting an offset value supplied to a tilt adjustment coil based on the β value.

Although Akagi describes using a tilt sensor to detect an offset, nowhere does Akagi describe performing control of a current supplied to a tilt adjustment coil based on an offset adjustment signal.

Accordingly, it could not have been obvious from an attempted combination of Matsumoto and Akagi to record an offset adjustment signal in a test recording area of an optical disc while varying the level of a driving signal supplied to a tilt adjustment coil, and to perform an operation to play back the recorded offset adjustment signal to determine the level of the drive signal at which the maximum β value of the RF signal resulting from the playback is obtained, so as to set an offset value supplied to the tilt adjustment coil.

Claim 1 defines a tilt control method in an optical pickup which includes the steps of “recording an offset adjustment signal” which is “recorded while modifying a driving signal level supplied to said tilt adjustment coil,” “playing back an RF signal of said offset adjustment signal that was recorded on the optical disk”, and “setting said driving signal level, when a β value ... reaches a maximum, as an offset value for the driving signal to be supplied to the tilt adjustment coil”. Therefore, claim 1 is submitted to clearly distinguish patentably over the attempted combination of Akagi et al. and Matsumoto.

Claim 2 depends from and contains all of the limitations of claim 1 so as to also distinguish patentably over the prior art.

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Claim 3 defines a tilt control apparatus for adjusting the tilt of an objective lens in an optical pickup, in which “an offset adjustment signal is written to the disc by recording a signal to the disc by said signal recording circuit while said tilt control circuit modifies the driving signal level to the tilt control coil”, “said photo detector circuit detects an RF signal of the offset adjustment signal that was recorded on the disc”, and “the tilt control circuit uses the driving signal level for the tilt control coil corresponding to the maximum of the detected β value as an offset value for tilt control”. Therefore, claim 3 is submitted to clearly distinguish patentably over the attempted combination of Akagi, et al. and Matsumoto.

Claim 4 depends from and contains all of the limitations of claim 3, so that such claim is also submitted to clearly distinguish patentably over the attempted combination of references.

In conclusion, claims 1-4 are submitted to clearly distinguish patentably over the prior art for the reasons set forth above. Therefore, reconsideration and allowance are respectfully requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6846 to discuss the steps necessary for placing the application in condition for allowance.

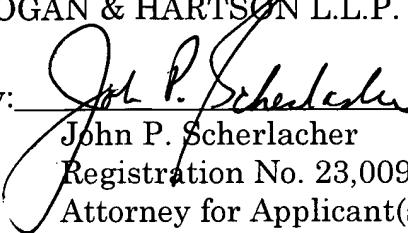
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Respectfully submitted,
HOGAN & HARTSON L.L.P.

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